WHAT IS CLAIMED IS:

1.   An integrated circuit, the integrated circuit
during operation operating with memory, the integrated circuit
comprising:
       an interface circuit configured to control access to
said memory, the interface circuit coupled to said memory;
       an embedded processor configured to control the
integrated circuit, the embedded processor coupled to said
interface circuit to receive information therefrom;
       an array processor for performing arithmetic
calculations, the array processor coupled to said interface
circuit to receive information therefrom.

2.   The integrated circuit according to claim 1
wherein said array processor comprises:
       a plurality of multiply/accumulators; and
       a shared operand circuit coupled to provide a shared
operand to at least two of said plurality of
multiplier/accumulators.

3.   The integrated circuit according to claim 1
wherein said interface circuit includes a wire bundle for
providing wide access.

4.   The integrated circuit according to claim 3
wherein said wire bundle comprises at least 256 wires.

ADD A2